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Imagery Analysis Monthly Review

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The information and judgments presented in this publication were derived principally from analysis of imagery. Although information from other sources of intelligence may be included for background, this publication does not reflect an all-source assessment and has not been formally coordinated within CIA. (U)

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Imagery Analysis Monthly Review

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USSR

Increased Effort in Advanced Transportation Systems [redacted] 25X1

Imagery of April and May 1979 shows that the Soviets are expanding their capsule-tube transportation program and are experimenting with a new type of passenger transportation system at the Ramenskoye Capsule-Tube Research and Development Center. The center, which is located southeast of Moscow, has been expanded since 1976. The expansion is related to research on a magnetic-levitation system of passenger transportation. The system relies on a series of electromagnets to move a vehicle which hovers above rails. A 520-meter-long test track, a vehicle terminal building, an administration/engineering building and several support buildings are currently under construction. One test vehicle was observed resting on the test track when the R & D center [redacted] 25X1
[redacted] [redacted] 25X1

Capsule-tube systems employ compressed air to propel wheeled cylindrical capsules through a tube or pipe. Four operational systems, all used to transport sand or gravel, and a fifth system, which is nearly operational, have been identified on photography of the Soviet Union. The Chismena system consists of a [redacted] pipeline which transports 25X1
stone 3 kilometers from a quarry to a crushing and shipping facility. The Dzerzhinsk system consists of a [redacted] pipeline which transports 25X1
sand and gravel from a wharf on the Oka River to a concrete products plant at Dzerzhinsk, 7 kilometers away. Imagery of April 1979 revealed a second capsule-tube under construction at Dzerzhinsk. The second tube will parallel the first and will probably transport the same type of material. [redacted] 25X1

The two capsule-tube systems at Shulaveri share a common loading station for sand and gravel. One system extends 2 kilometers from the loading station to a railcar loading site, and the second extends 50 kilometers to a concrete products plant at Tbilisi. [redacted] 25X1

The newest system is located at Tula, south of Moscow. When complete, the system will transport sand and gravel approximately 4 kilometers from a quarry to a rail loading facility. [redacted] 25X1

[redacted] 25X1

[redacted] 25X1

China

Ground Forces Strengthened in the Lanzhou Military Region [redacted] 25X1

A recently completed photographic analysis indicates that since 1975 the Chinese have strengthened their ground forces in the Lanzhou (Lan-chou) Military Region by forming two new divisions and increasing the firepower of the 11 existing ones. Ground forces improvements have been noted throughout the region, although the greatest emphasis has been in the north-central part, where the new divisions are located. The Chinese have strengthened their forces there to defend both the Gansu (Kansu) Corridor, through which run the primary lines of communication to west China, and the northern approaches to the city of Lanzhou. These force improvements are probably in reaction to a Soviet force buildup in Mongolia. [redacted] 25X1

The two new divisions, not yet fully equipped, are an infantry division at Wuwei (Wu-wei) and a probable antitank division at Paiyin (Pai-yin). Elements of these two divisions were first identified in October 1976. These are the only new main force Chinese divisions formed along the Sino-Soviet border since the mid-1970s, although NSA reports that in early 1979 an infantry division relocated from the Chengdu (Cheng-tu) Military Region to the Xinjiang (Sinkiang) Military Region. The probable antitank division is only the fifth such division identified in China. [redacted] 25X1

Other improvements in the Lanzhou Military Region since 1975, achieved primarily by expanding previously existing armies and divisions, include:

-- adding three more tank regiments to increase the total number of tanks from 250 to 500.

-- increasing the number of multiple rocket launchers from about 40 to 200.

-- doubling the number of AAA guns from 24 to 48 in each of the region's three army-level AAA regiments. The additional guns also are a qualitative improvement because they are radar-controlled models not previously found in these units.

-- increasing the number of ponton bridges from about 140 to 360. In addition, 18 KMM treadway bridges, not previously found in the region, have been added to the inventory.

-- expanding the garrison division at Shuangchengzi (Shuang-cheng-tzu) from three to four regiments. [redacted] 25X1

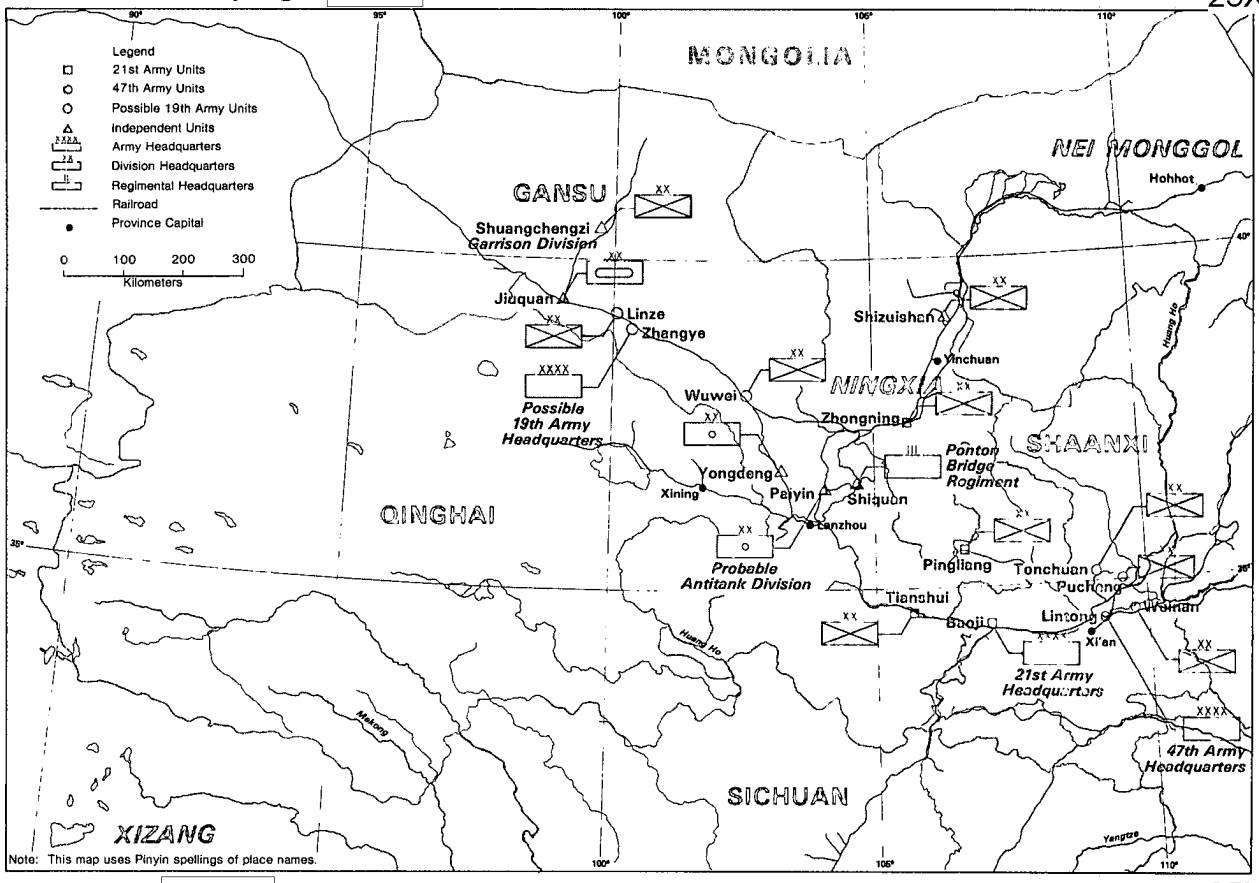
Ground forces currently deployed in the region include three armies and several independent units. The 21st and 47th Armies each contain three infantry divisions and are deployed in the eastern part of the region. The other army, recently identified by NSA as possibly the 19th Army, appears to consist of two infantry divisions and is deployed along the Gansu Corridor. An armored division and a garrison division, also deployed in the Gansu Corridor, appear to be independent, although it is possible they are attached to the 19th Army. Known independent units, which are directly subordinate to the military region commander, are a field artillery division, an antitank division, an infantry division, and a ponton bridge regiment. [redacted] 25X1

For additional details see IS 79-10071J, [redacted] Ground Forces 25X1 in the Lanzhou (Lan-chou) Military Region, China, 19 April 1979. (TOP SECRET RUFF [redacted] 25X1

[redacted] 25X1

[redacted] 25X1

Location of Major Ground Force Units in the Lanzhou Military Region. [redacted] 25X1



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China

First Deployment of New Types of River-Crossing Equipment

25X1

Analysis of recent imagery reveals that the Chinese have introduced two new types of river- and gap-crossing equipment into their engineer units and may be developing a third. Widespread deployment of these new types of equipment would improve the mobility and flexibility of China's ground force units. In addition, recent increases in the size and frequency of river-crossing exercises and the expansion of several independent ponton regiments to division-size units show China's interest in upgrading its river- and gap-crossing capabilities.

25X1

In December 1978, the first deployment in China of what appeared to be PPS-type heavy girder bridging was seen at an engineer unit in the Wuhan (Wu-han) Military Region (MR). Pontons for this PPS-type bridge were seen in April 1978 at Guangji (Kuang-chi) Shipyard near Wuhan where they are probably being produced. This bridge is capable of accommodating any type of military equipment presently in the Chinese inventory. Because of its size and construction, a PPS-type heavy girder bridge is generally deployed in the rear areas rather than at the front.

25X1

A new type heavy ponton bridge, similar to the Romanian PR-60 and the North Korean S-type, was seen in a ponton company subordinate to the 38th Army Headquarters in the Beijing (Peking) MR in April 1979. This equipment was also seen in the engineer battalion of an independent infantry division in the Xinjiang (Sinkiang) MR in May 1979. Although the 38th Army would likely be one of the first recipients of any new type of ground forces equipment, units in Xinjiang usually are not the first to recieve new equipment. This may indicate that use of this piece of equipment is widespread and that it has been in service for some time. This bridge is also capable of handling all types of Chinese military equipment.

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In late April 1977, a tank-launched assault bridge was seen at both an R&D facility and a military school near Beijing. This vehicle has not been seen deployed to any regular unit. We are unsure if the assault bridge, which appears similar to the Soviet MTU-54, was produced by the Chinese or given to them by the Soviet Union in the late 1950's. The deployment of the assault bridge would provide Chinese armored units with an organic short-gap crossing capability.

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China

Increase in Chinese Electric Power Generation Capacity, 1976-78 [redacted] 25X1

A recently completed imagery analysis study reveals that the Chinese expanded their electric power generating capacity by a almost one-third during the three-year period 1976-78. Forty major new plants were completed and 51 existing ones were expanded. Most of the increased capacity was in thermal power. Throughout this period the Chinese continued to emphasize the installation of large-size generators at thermal power plants--mostly 100-, 125-, and 200-Megawatt (MW) units. The majority of China's thermal plants are fired with coal, most of the rest use oil, and only two plants--in Szechwan--are gas fired. A number of thermal plants can burn either coal or oil. [redacted] 25X1

A total of 291 major thermal and hydroelectric power plants (23-MW or more capacity) have been identified in China. No capacity figures are available for 12 of the hydroelectric power plants, but the total generating capacity of the remaining 279 plants is estimated from photography and other sources to be 40,840 MW (30,070 MW thermal and 10,770 MW hydroelectric). According to Chinese press reports, another 3,000 MW are generated by about 80,000 small hydroelectric power plants. An additional undetermined but relatively small amount is generated by numerous small thermal power plants. [redacted] 25X1

Between January 1976 and December 1978, 23 new thermal power plants were completed and 43 existing plants were expanded, increasing the thermal electric generating capacity by about 7,455 MW. Another 2,050-MW increase in electric generating capacity can be attributed to hydroelectric power plants. Seventeen new hydroelectric plants were completed and eight existing ones were enlarged during this period. [redacted] 25X1

An additional 33 thermal and 16 hydroelectric power plants were being expanded or were still under construction at the end of 1978. The Chinese have announced that they plan to increase their generating capacity to 100,000 MW during the current Ten-Year Plan. This would mean more than doubling present capacity by 1985, which, based on projects now under way and past performance, is probably beyond China's capability. [redacted] 25X1

For additional details see IS 79-10063K, [redacted]9, Chinese Electric Power Industry, January 1976 - December 1978, April 1979. [redacted] 25X1

[redacted] 25X1

[redacted] 25X1

[redacted] 25X1

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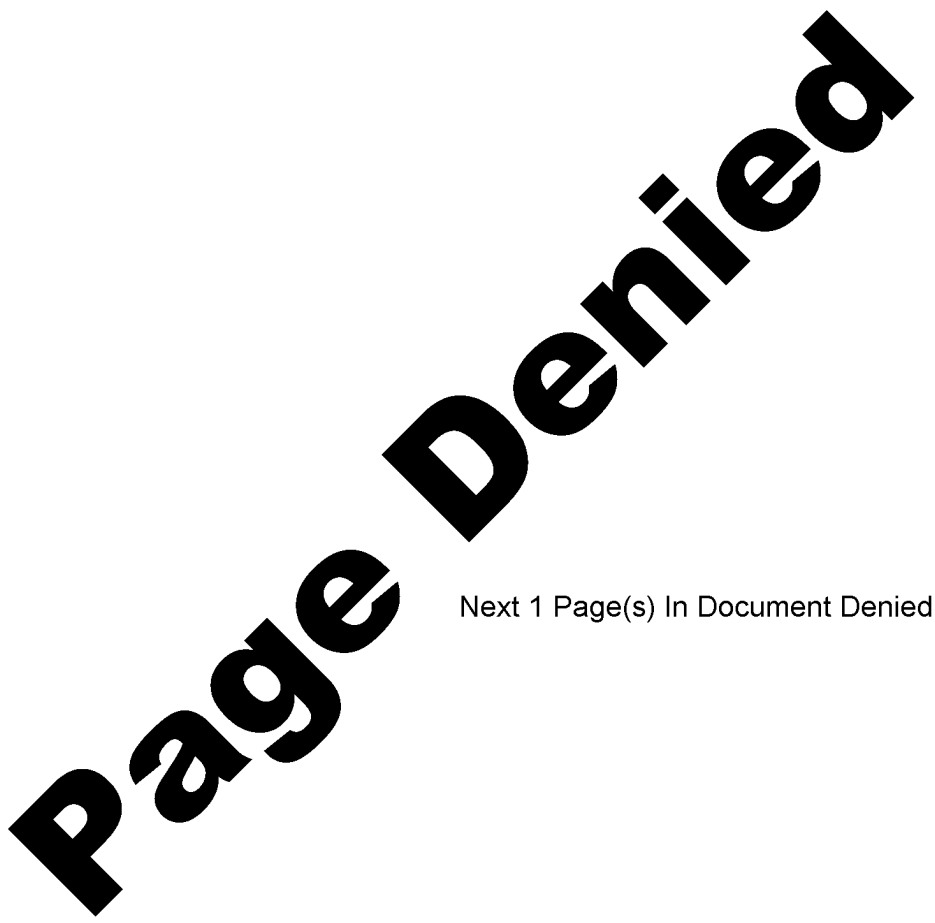
[redacted] 25X1



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New OIA Publications [redacted] 25X1

The following reports have been published by the Office of Imagery Analysis since the last issue of the Imagery Analysis Monthly Review.

Imagery Research Papers

1. IS 79-10073K, [redacted], Photographic Analysis of Soviet Nuclear Submarines and Major Surface Combatants Unavailable for Operations, 1977-1978, May 1979 (TOP SECRET RUFF/ [redacted] 25X1 25X1 [redacted] 25X1
2. IS 79-10065K, [redacted] Selected Geothermal Facilities in the Soviet Union, June 1979 (TOP SECRET RUFF [redacted] 25X1 25X1 [redacted] 25X1
3. IS 79-10087K, [redacted] Imagery Analysis of the Probable Acoustical Test Area at the Kurumach Rocket Test Facility, USSR June 1979 (TOP SECRET RUFF [redacted] 25X1 25X1
4. IS 79-10043K, [redacted], An Imagery Analysis of the BMEW Radars at Pechora and Lyaki, USSR, June 1979 (TOP SECRET RUFF/ [redacted] 25X1 25X1

Imagery Analysis Memorandums

1. IS 79-10072K, [redacted] SS-20 Regimental Vehicle Maintenance Facility (TOP SECRET RUFF) 25X1
2. IS 79-10074K, [redacted] Summary of SAL-Related Activities (Missiles), 10 September 1978 - 15 March 1979 (TOP SECRET RUFF [redacted] 25X1 25X1
3. IS 79-10084K, [redacted], Steam Production Plants and Associated POL Storage Areas at SS-20 Bases in Western USSR (TOP SECRET RUFF) 25X1
4. IS 79-10085K [redacted] Analysis of the Central Design Bureau for Space and Intercontinental Rockets, Moskva Missile and Space Development Center, Kaliningrad 88 (TOP SECRET RUFF/ [redacted] 25X1 25X1
5. IS 79-10079K, [redacted] Construction and Test Activity, Terminal Ballistic Research Laboratory, Chandigarh, India (TOP SECRET RUFF) 25X1
6. IS 79-10080K, [redacted] Previously Undetected E-II-Class SSGN, Overhaul at Petrovka Ship Repair Yard, USSR (TOP SECRET RUFF) 25X1
7. IS 79-10083K, [redacted] History of Backfire Bombers with Modified Engine Inlets (TOP SECRET RUFF) 25X1

8. IS 79-10086K, [redacted] Reported Underwater Explosion Test Facility at Semipalatinsk Identified as a Grain Processing Yard (TOP SECRET RUFF) 25X1

9. IS 79-10071J, [redacted] Ground Forces in the Lanzhou (Lan-chou) Military Region, China (TOP SECRET RUFF [redacted] 25X1 25X1

10. IS 79-10078K, [redacted] South Yemini Ground Forces Deployment in Eastern PDRY (TOP SECRET RUFF) 25X1

11. IS 79-10093K, [redacted] Ground Forces Activity in Angola's Military Region 5 (TOP SECRET RUFF, [redacted] 25X1 25X1

12. IS 79-10081K, [redacted] Status of Algerian Forces and Saharan Refugee Camps-Tindouf Area, Algeria (TOP SECRET RUFF) 25X1

[redacted]